

RI-EC-LITE Series

4 or 16 Device GSM Communication Gateway



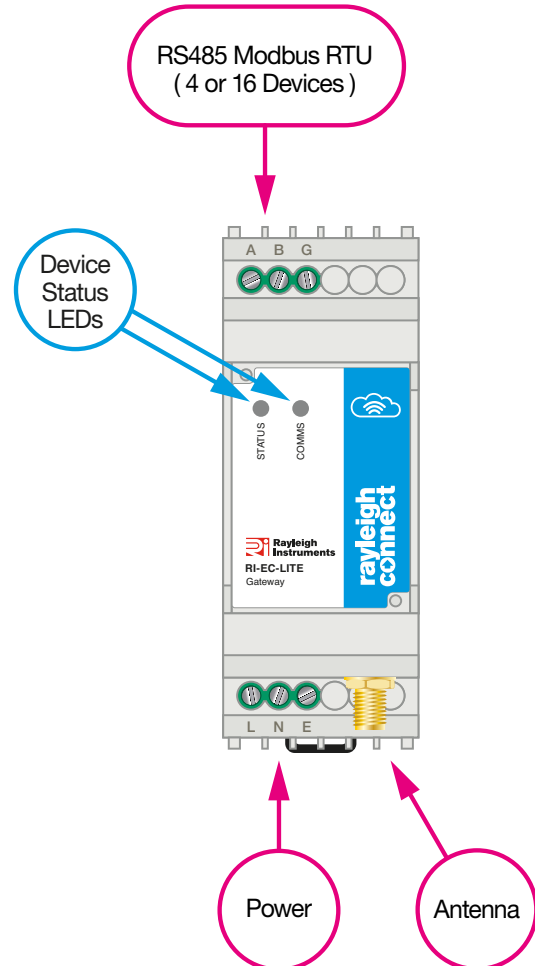
- Compact size - 2 module (35mm width) DIN Rail mounting
- 4G LTE Cat M1 (with 2G fallback)
- RS485 Modbus RTU input:-
4 x Modbus devices - RI-EC4-LITE
16 x Modbus devices - RI-EC16-LITE
- 110V/230V Auxiliary Supply
- Radio Equipment Directive certified (RED)
- External antenna for improved signal supplied (1.5m, 3m or 5m extension antenna optional)
- USB-C port for diagnostics and firmware update
- Quad band 850, 900, 1800, 1900MHz

Product Description

The RI-EC-LITE is a robust and easy to use DIN rail mounted data acquisition communication gateway. The RI-EC-LITE Series are part of a growing family of gateway devices designed to be used with the **rayleighconnect™** cloud based software platform.

Input is from RS485 Modbus RTU and two versions are available. The RI-EC4-LITE accepts inputs from up to four Modbus devices and the RI-EC16-LITE accepts inputs from up to sixteen Modbus devices.

The data is then transmitted via 4G LTE Cat M1 to the **rayleighconnect™** cloud software platform.



Display

Display Type	2 x LEDs	
LED indicators	STATUS LED	GREEN slow flashing light = Connected to the cloud system. GREEN fast flashing light = Started /restarted within last 10 seconds. YELLOW light = Not connected to the cloud system. RED light Used only in recovery mode.
	COMMS LED	GREEN solid light = Connected to network, PDP context active. YELLOW solid light = PDP context inactive, check APN configuration. RED solid = Usually indicates a SIM issue (e.g. no SIM detected)

Input

Antenna	5dBi - Standard Version (High-gain antenna available)
Quadband	850/900/1800/1900 MHz
SIM card type	Micro SIM

Auxiliary Supply

Voltage range	110V/230V (±10%)
Operating frequency	47...50...63Hz
Power consumption	<18VA

Outputs

Communication type	RS485
Communication protocol	Modbus
Address	1...247
Number of bits	7bits or 8bits
Stop bits	1bits or 2bits
Parity	None, odd, even
Baud rate	2400, 4800, 9600 (default), 19200, 38400, 57600, 115200
Required response time to request	≤100ms
Number of Modbus devices connected on the bus	Up to 4 with RI-EC4-LITE Up to 16 with RI-EC16-LITE
Max distance from Master device	1200M (longer with booster)

Insulation

Installation category	III
Pollution degree	2
Insulation voltage rating	300V L-N

Environmental Conditions

Reference temperature	23°C
Specified temperature operating range	-10°C...+55°C
Storage temperature	-20°C...+70°C
Relative humidity	0...85%, non condensing

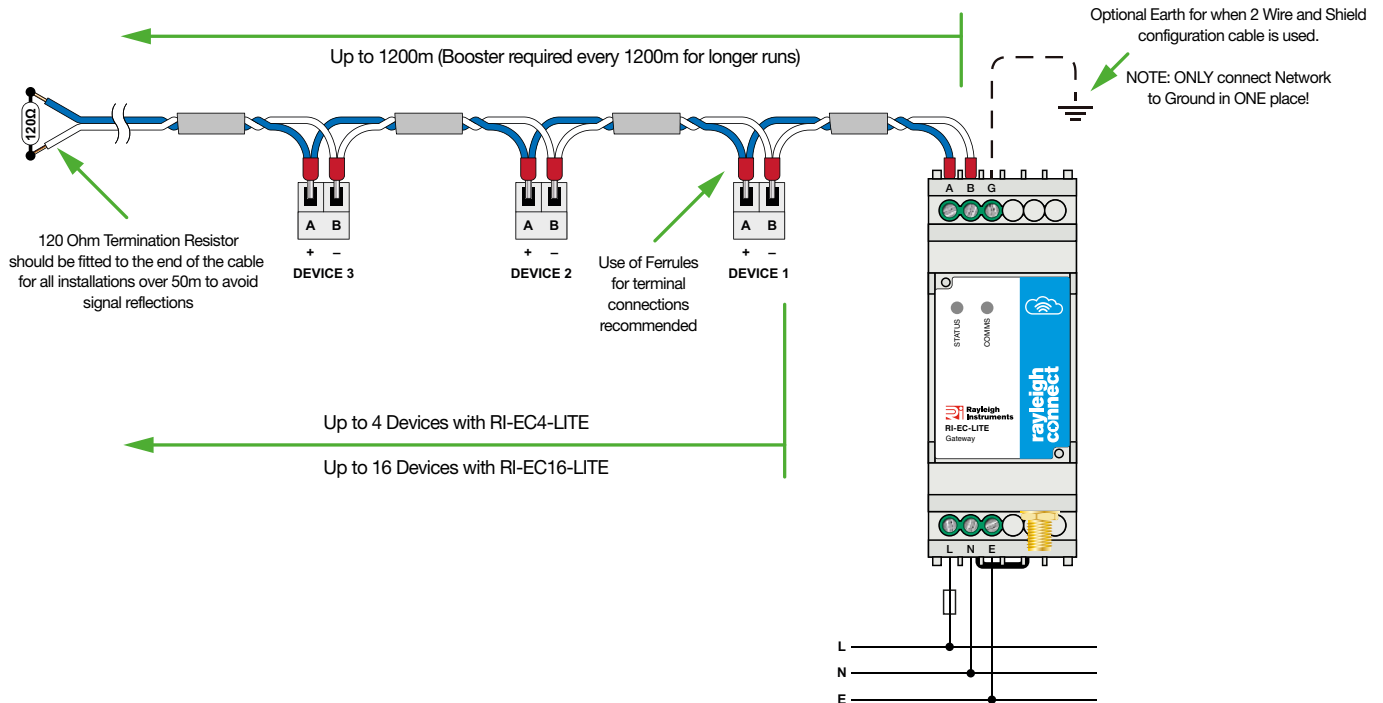
Mechanical

Housing	2 module DIN 43880
Mounting	Snap-on 35mm DIN rail
Housing material	Self-extinguishing polycarbonate (UL94 V-0)
Weight	<116g

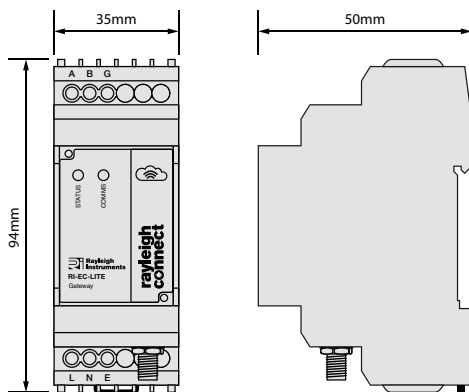
Conformity

Electromagnetic compatibility	IEC/EN55032, IEC/EN55016-2-3 Class B, IEC/EN61000-4-2, IEC/EN61000-4-3, IEC/EN61000-4-4, IEC/EN61000-4-5, IEC/EN61000-4-6, IEC/EN61000-4-11
Safety	IEC/EN61010
Radio Equipment Directive (RED)	Yes (Directive 2014/53/EU)

Wiring Diagram



Dimensions (mm)



Model Selection Table

Communications	Model
Connect up to 4 Modbus RTU devices	RI-EC4-LITE
Connect up to 16 Modbus RTU devices	RI-EC16-LITE